UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,969	09/07/2000	Dr. Yiming Zhou	450110-02767	2147

22850 7590 08/10/2006	EXAMINER
C. IRVIN MCCLELLAND	WIDHALM, ANGELA M

C. IRVIN MCCLELLAND
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

ART UNIT	PAPER NUMBER
2152	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/656,969	ZHOU, DR. YIMING
	Examiner	Art Unit	
	Angela Widhalm	2152	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>07 July 2006</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-5 and 9-17</u> is/are rejected.

7) ☐ Claim(s) <u>6-8</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>07 September 2000</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This is a non-final office action in response to remarks for Application Number

09/656,969 filed 7 July 2006. No claims have been amended, added, or cancelled. The

claims 1-17 are pending in this application.

Response to Arguments

2.   To address Applicant's concern regarding the IDS filed on 7 September 2000, the

Examiner initialed and signed the filed IDS on form 1449 in the office action mailed 10

November 2003. Therefore, the references have already been acknowledged.

3.   Applicant's arguments, see page 2 lines 22-24, filed 7 July 2006, with respect to

the rejection of claims 1, 4, 6-8, and 14 under 35 U.S.C. 112, second paragraph have

been fully considered and are persuasive. The rejection of claims 1, 4, 6-8, and 14

have been withdrawn.

4.   Applicant's arguments, see page 3 line 23 – page 4 line 5, filed 7 July 2006, with

respect to the rejection(s) of claim(s) 1-17 under Hild et al. have been fully considered

and are persuasive. Therefore, the rejection has been withdrawn. However, upon

further consideration, a new ground(s) of rejection is made in view of Gall et al. (U.S.

Patent 6,356,929), further in view of Wydra et al. (U.S. Patent 6,598,067) and Hirata et

al. (U.S. Patent 6,665,716).

Drawings

5.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show

every feature of the invention specified in the claims. Therefore, the following must be

shown or the feature(s) canceled from the claim(s). No new matter should be entered.

None of the figures illustrate the following limitations of claims 1-10:

a.   (Claim 1) that the current status is a measure of the station's available

hardware resources

b.   (Claim 1) that the dynamic status is based on the station's current usage

of hardware resources

c.   (Claim 1) a trust list containing trusted station identifiers

d.   (Claim 1) service requests being directed to each other station identified in

the trust list

e.   (Claim 1) that the service requests constitute a request to each other

station to perform a task for the station

f.   (Claim 1) that the acceptance or refusal is being decided based on current

status of station

g.   (Claim 2) that the static status is based on the station's hardware

resources

h.   (Claim 3) that the security system is operable to handle encryption

between stations

i.   (Claim 4) that the task execution, monitory, and reporting module is

operable to broadcast progress updates concerning accepted tasks

j.   (Claim 5) that the task scheduler module is arranged to monitor tasks or

that the tasks being monitored may include tasks initiated by the station or

requested by other stations

k.   (Claim 6) that a plurality of software modules are stored in a software

resource repository

l.   (Claim 6) that the service requirement analysis module is operable to

maintain the software resource repository by importing and exporting software

modules

m.   (Claim 7) that the messages the station is capable of transmitting offer

software modules to each other trusted station.

n.   (Claim 8) that the service/performance history learning analysis module is

operable to apply artificial intelligence to find task bottlenecks in stations and also

is operable to notify a network administrator of unresolved task bottlenecks

o.   (Claim 9) that the messages the task failure management module is

capable of transmitting are failure messages

p.   (Claim 10) that the task failure management module is operable to monitor

for failure messages and to handle failure messages as service request

messages

q.   Figure 5 illustrates that the status is evaluated, but there is no description

of how the status is evaluated.

r.   Claims 14-17 claim a method and no method is illustrated in the figures.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6.   The abstract of the disclosure is objected to because of the use of claim language in the abstract. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that

the abstract not exceed 150 words in length since the space provided for the abstract

on the computer tape used by the printer is limited. The form and legal phraseology

often used in patent claims, such as "means" and "said," should be avoided. The

abstract should describe the disclosure sufficiently to assist readers in deciding whether

there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information

given in the title. It should avoid using phrases which can be implied, such as, "The

disclosure concerns," "The disclosure defined by this invention," "The disclosure

describes," etc.

7.   The disclosure is objected to because of the following informalities:

s.   Page 5 lines 3-10 appear to describe figure 4 even though figure 5 is

stated.

t.   The titles of figures 4 and 5 provided in the "Brief Description of the

Drawings" section may be misleading. The current titles of figures 4 and 5 imply

that the illustrated structures apply to any one of the modules shown in figure 3,

whereas the "Detailed Description" section describes figure 4 to refer to the

broadcast/answer module and figure 5 to refer to the self-assessment module.

Examiner proposes figure 4 be described as showing the internal structure of the

broadcast/answer module and figure 5 be described as showing the internal

structure of the self-assessment module.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.   Claims 16 and 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

10.   Claim 16 claims computer software without a corresponding hardware structure. The phrase "program code means" does not provide a hardware structure for the computer software. As such, claim 16 contains abstract and non-statutory subject matter. Furthermore, the only support the specification provides can be found on page 15 lines 6-10. Within this section, there is no mention of "program code means" and it is implied that a transmission medium stores a computer program. Transmission media are considered non-statutory subject matter according to the current "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (see pages 50-57).

The Interim Guidelines explain that non-statutory subject matter includes non-functional descriptive material recorded on some computer-readable medium or on an electromagnetic carrier signal (page 51) and a signal encoded with functional descriptive material (pages 50, 55-57). Also, when a claim can be read so broadly as to include statutory and nonstatutory subject matter, it must be amended to limit the claim to statutory subject matter (page 21).

Additionally, the description of a computer-readable medium in the specification

is used to determine whether the claim contains statutory or non-statutory subject

matter. When both statutory (e.g. storage or memory media such as magnetic or optical

media, CD-ROM or non-volatile) and non-statutory (e.g. digital signals; conveyed via an

electrical connection, optical fiber, or communication medium such as magnetic, optical,

electromagnetic, infrared or propagation medium) embodiments are included in the

specification to describe a computer-readable medium, the computer-readable medium

is not limited to a statutory, i.e. physical, embodiment.

11.   Claim 17 claims a carrier medium comprising a storage medium, but storage

medium is not limited to a statutory embodiment in light of Applicant's specification page

15 lines 6-10. This section of the specification implies that a transmission medium

performs a storage function and therefore a transmission medium is interpreted to be a

storage medium. Transmission media are considered non-statutory subject matter as

explained above regarding claim 16.

.12.   The claimed invention relates to an apparatus and method (collectively referred

to as 'system') that broadcasts job requests to other systems trusted by the requesting

system. Before accepting or denying a job request, the system receiving the job

request first determines the hardware resources on its system and the current usage of

those resources. The system accepts or denies the job request based on this

determination. In the same field of endeavor, the applied references teach the same.

Claim Rejections - 35 USC § 102

13.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14.   <u>Claims 1-3, 9-14, and 16-17 are rejected under 35 U.S.C. 102(e) as being</u>

<u>unpatentable over Gall et al. (U.S. Patent 6,356,929), hereafter referred to as Gall.</u>

15.   Regarding claims 1 and 14, Gall disclosed a station for a network apparatus, said

network apparatus comprising said station and a plurality of other stations, all

interconnected in a network by a communication link (*see figure 2, col. 2 lines 31-34*),

said station comprising:

a network connection (*Multiple computer systems may be networked together,*

see figure 1 #150 network interface, col. 5 lines 1-11, col. 7 lines 12-14);

a self assessment module operable to determine a current status of said station,

(*Before accepting a request, the computer receiving the request first determines if it has*

the resources to perform the job, see col. 9 lines 44-48)

wherein said current status is a measure of available hardware resources

of said station and (*Determining whether or not the computer is compatible, see*

col. 3 lines 64-66, col. 8 lines 10-15, col. 9 lines 7-9,44-48)

wherein said current status includes a determination of a dynamic status

for said station based on current usage of said hardware resources of said

station; (*Determining whether or not the computer has sufficient resources, e.g.*

memory, see col. 3 lines 64-66, col. 8 lines 10-15, col. 9 lines 7-9,44-48)

a trust list that includes a station identifier for each other station of said plurality

of other stations which is designated as trusted to perform tasks for said station;

(*Security attributes limit the type of computers that may perform job requests. For*

instance, only computers in a certain department are trusted to perform the job requests

even though computers in another department have the same capabilities, see col. 8

line 58 – col. 9 line 9. Additionally, only authorized computer systems are able to

register, see col. 9 lines 14-21. The use of these security attributes to limit the type of

computers performing job requests implies that there is a list containing information on

which computers meet the requirements)

a broadcast unit operable to transmit service requests to said network connection

and via said network, said service requests being directed to said each other station

identified in said trust list and constituting a request to said each other station to perform

a task for said station; (*The multicast router broadcasts job requests across the network*

to other computers, see col. 4 lines 35-39,55-62. Additionally, a request concerning

proprietary information is only sent computers within the same company or department,

col. 9 lines 1-9)

an answer unit operable to receive service requests via said network through

said network connection (*A computer is able to receive a job request sent via a network,*

see col. 4 lines 55-61) and, in response thereto, to transmit via said network through

said network connection an acceptance or refusal message in respect of said service

request (*A computer receiving a job requests sends an acceptance message to the*

computer that send the job request, see col. 4 lines 63-64), said acceptance or refusal

being decided based on said current status of said station, as determined by said self

assessment module (*A computer only accepts a job request after determining if the*

computer receiving the request has the resources to process the request, see col. 4

lines 63-64, col. 9 lines 44-48).

16.   Regarding claim 2, Gall disclosed said self-assessment module is operable to

determine a static status for said station based on said hardware resources of said

station (*Determining whether or not the computer is compatible, see col. 3 lines 64-66,*

col. 8 lines 10-15, col. 9 lines 7-9,44-48).

17.   Regarding claim 3, Gall disclosed a system security module operable to handle

encryption between said station and each other trusted station (*Acceptance of a job*

request by a receiving computer is subject to certain security attributes, e.g. location of

the receiving computer and password authorization, see col. 8 line 58 – col. 9 line 21).

18.   Regarding claim 9, Gall disclosed a task failure management module, operable

to transmit to said network a failure message in response to failure of said station

successfully to complete a task being performed for one of said other stations (*A user is*

able to abort job requests being performed on their computer. Once the jobs are

aborted, the jobs must be restarted elsewhere. This implies that a failure notice is sent.

See col. 5 lines 50-58).

19.   Regarding claim 10, Gall disclosed wherein said task failure management

module is further operable to monitor for failure messages transmitted by one of its

trusted stations and, in response thereto, to handle said failure message as said service

request message for said failed task (*Because an aborted job must be restarted*

elsewhere, the aborted job becomes a new job request. It is also implied that some

mechanism monitors for messages of aborted job requests. See col. 5 lines 50-58).

20.   Regarding claim 11, Gall disclosed a plurality of stations according to claim 1

interconnected by a communication link (*Multiple computer systems are coupled to an*

IP multicast router, see figure 2 col. 2 lines 31-34, col. 7 lines 38-45).

21.   Regarding claim 12, Gall disclosed there is no central server for said network

(*Jobs may be shared between clients and servers, see figure 2, col. 7 lines 38-45,50-*

58).

22.   Regarding claim 13, Gall disclosed said network operates to a protocol that

permits stations to be removed from and added to said network dynamically (*Computers*

must first register in order to receive data, e.g. job requests, passed over the network.

See col. 4 lines 35-43).

23.   Regarding claim 16, Gall disclosed computer software performing the method

according to claim 14 (see col. 7 lines 26-31).

24.   Regarding claim 17, Gall disclosed a carrier medium carrying computer software

according to claim 16, wherein the carrier medium comprises a storage medium (see

col. 7 lines 26-37).

Claim Rejections - 35 USC § 103

25.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

26.   Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gall

as applied to claim 1 above, and further in view of Wydra et al. (U.S. Patent 6,598,067),

hereafter referred to as Wydra.

27.   Regarding claim 4, Gall disclosed the system, substantially as claimed, as described above in claim 1, but did not explicitly disclose a task execution, monitoring and reporting module operable to broadcast to said network progress updates on tasks accepted by and being performed in said station on behalf of an other station.

However, in a related art, Wydra disclosed displaying past, current, and future jobs and their respective statuses (see figures 10, 12, col. 12 line 42 – col. 13 line 8). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the job scheduling details described by Wydra into Gall's system to provide further explanations on how to schedule shared jobs.

28.   Regarding claim 5, Gall disclosed the system, substantially as claimed, as described above in claim 1, but did not explicitly disclose a task scheduler module arranged to monitor all tasks being performed in said station.

However, in a related art, Wydra disclosed displaying past, current, and future jobs and their respective statuses (see figures 10, 12, col. 12 line 42 – col. 13 line 8). This implies the jobs are being monitored. It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the job scheduling details described by Wydra into Gall's system to provide further explanations on how to schedule shared jobs.

29.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gall, in view of what was well known in the art.

30.   Regarding claim 15, Gall disclosed the system, substantially as claimed, as described above in claim 14, but did not explicitly disclose further distribution of the job request by the second station to other stations trusted by the second station.

However, Examiner takes Official Notice (see MPEP 2144.03 Reliance on "Well Known" Prior Art) that repeating sending a job request was well known and would have been obvious to one of ordinary skill in the art at the time of invention. Doing so would increase the productivity and efficiency of a system instead of requiring the second station to notify the first station of a job request and wait for the first station to receive a response from a third station regarding the job the second station requested.

Allowable Subject Matter

31.   Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

32.   **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part
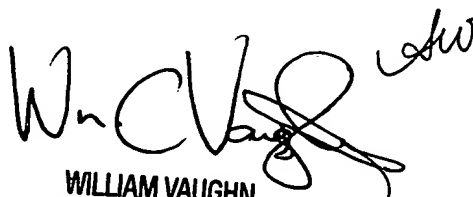
of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

33.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela Widhalm whose telephone number is (571) 272-1035. The examiner can normally be reached M-F, 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).   AW, 4 August 2006

WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100